

Product guide	Product guide
Kubernetes service	Kubernetes service
Get started	Get started
Getting started with IBM Cloud Kubernetes Service	Getting started with IBM Cloud Kubernetes Service
Understanding IBM Cloud Kubernetes Service	Understanding IBM Cloud Kubernetes Service
Your responsibilities with using IBM Cloud Kubernetes Service	Your responsibilities with using IBM Cloud Kubernetes Service
Use cases	Use cases
Learning paths	Learning paths
Release notes	Release notes
Tutorials	Tutorials
Tutorials library for Kubernetes Service	Tutorials library for Kubernetes Service
Setting up your first cluster in your Virtual Private Cloud (VPC)	Setting up your first cluster in your Virtual Private Cloud (VPC)
How to	How to
Planning your cluster environment	Planning your cluster environment
Preparing your account	Preparing your account
Installing the CLI	Installing the CLI
Setting up the API	Setting up the API
Creating clusters	Creating clusters
Accessing clusters	Accessing clusters
Adding worker nodes	Adding worker nodes
Managing the cluster and worker node lifecycle	Managing the cluster and worker node lifecycle
Checking your cluster version, operating system, and Kubernetes server version	Checking your cluster version, operating system, and Kubernetes server version
Updating clusters, worker nodes, and cluster components	Updating clusters, worker nodes, and cluster components
Creating and managing dedicated hosts on VPC Gen 2 infrastructure	Creating and managing dedicated hosts on VPC Gen 2 infrastructure
Preparing for host maintenance updates	Preparing for host maintenance updates
Setting the cluster credentials	Setting the cluster credentials
Rotating CA certificates in your cluster	Rotating CA certificates in your cluster
Migrating to a new Ubuntu	Migrating to a new Ubuntu
IBM Cloud	IBM Cloud
Adding tags and labels to clusters	Adding tags and labels to clusters
Checking worker node resource reserves	Checking worker node resource reserves
Setting up encryption	Setting up encryption
Enhancing security	Enhancing security
Managing access control	Managing access control
Securing cluster workloads	Securing cluster workloads
Controlling network traffic in Classic clusters	Controlling network traffic in Classic clusters
Controlling network traffic in VPC clusters	Controlling network traffic in VPC clusters
Adding static routes to worker nodes	Adding static routes to worker nodes
Configuring the cluster DNS provider	Configuring the cluster DNS provider
Setting up the cluster autoscaler	Setting up the cluster autoscaler
Logging and monitoring	Logging and monitoring
Setting up an image registry	Setting up an image registry
Continuous integration and delivery for app development and deployment	Continuous integration and delivery for app development and deployment
Developing and deploying apps	Developing and deploying apps
Setting up a service mesh with Istio	Setting up a service mesh with Istio
Exposing apps	Exposing apps
Preventing app workloads from running on edge worker nodes	Preventing app workloads from running on edge worker nodes
Deploying the Sysdig agent on edge worker nodes	Deploying the Sysdig agent on edge worker nodes
Enabling the IBM Storage Operator cluster add-on	Enabling the IBM Storage Operator cluster add-on
Setting up Block Storage for Classic	Setting up Block Storage for Classic
Setting up Block Storage for VPC	Setting up Block Storage for VPC
Setting up File Storage for Classic	Setting up File Storage for Classic
Setting up File Storage for VPC	Setting up File Storage for VPC
Setting up Object Storage	Setting up Object Storage
Setting up Portworx	Setting up Portworx
Backing up and restoring storage data	Backing up and restoring storage data
IBM Cloud storage utilities	IBM Cloud storage utilities
Enhancing cluster capabilities with integrations	Enhancing cluster capabilities with integrations
Managing cluster costs	Managing cluster costs
Tuning performance	Tuning performance
Removing clusters	Removing clusters
Reference	Reference
API reference	API reference
CLI plug-in reference	CLI plug-in reference
Version history	Version history
Add-on version history	Add-on version history
Ingress version history	Ingress version history
Archived version history	Archived version history
Activity Tracker events	Activity Tracker events
Locations	Locations
Supported IBM Cloud and third-party integrations	Supported IBM Cloud and third-party integrations
Default service settings for Kubernetes components	Default service settings for Kubernetes components
Worker node flavors	Worker node flavors
Related links	Related links
Help	Help
Viewing cloud status	Viewing cloud status
FAQs	FAQs
Best practices for IBM Cloud Kubernetes Service	Best practices for IBM Cloud Kubernetes Service
Running tests with the Diagnostics and Debug Tool	Running tests with the Diagnostics and Debug Tool
Troubleshooting apps in IBM Cloud Kubernetes Service	Troubleshooting apps in IBM Cloud Kubernetes Service
Troubleshooting	Troubleshooting
Contacting support	Contacting support
Service limitations	Service limitations
Requesting access to allowlisted features	Requesting access to allowlisted features
Site map	Site map
Go to product UI	Go to product UI
About this product	About this product
Expand all Collapse all	Expand all Collapse all

Migrating to a new Ubuntu version

Last updated 2024-06-26

To migrate your worker nodes to a new Ubuntu version, you must provision a new worker pool, add worker nodes to the new pool, then remove the original worker pool. The default operating system for all supported IBM Cloud Kubernetes Service cluster versions is Ubuntu 20. Additionally, Ubuntu 24 is available for early access with limitations.

Ubuntu 24 limitations

Important: Ubuntu 24 is available for early release and should not be used for production workloads. Make sure you understand the limitations for this version before you begin any migrations.

Beta: Ubuntu 24 is available in Beta. The following limitations and disclaimers apply.

- Should not be used for production workloads.
- Available for cluster versions 1.29 and later.
- Supported for virtual servers only. Cannot be used with bare metal servers.
- Not available for GPU worker node flavors.
- NTP uses `timesyncd`. Related commands might be updated.
- The following add-ons and features are not supported. Do not migrate your worker nodes if you use these features:
 - CSUtil add-on
 - Object storage plug-in
 - Portworx

Before you begin

- Review your worker pool operating systems to determine which pools you need to migrate.

```
$ ibmcloud ks worker-pools -c CLUSTER
```

- For the worker pools that you want to migrate, review the details of the worker pool.

```
$ ibmcloud ks worker-pool get --cluster CLUSTER --worker-pool WORKER-POOL --output json
```

- In the output, note the zone and either the private and public VLAN ID for Classic clusters or the subnet ID for VPC clusters. Also note any custom labels that you are using. The default worker pool label is `ibm-cloud.kubernetes.io`. Any labels other than `ibm-cloud.kubernetes.io` are custom labels that you should add to your new worker pool.

Migration steps

Migrate your worker nodes to use Ubuntu 24. These steps apply to all supported cluster versions.

- In your cluster, create a new worker pool for the Ubuntu 24 worker nodes. Include the `--operating-system=UBUNTU_24_64` option. Make sure that the number of nodes specified with the `--size-per-zone` option matches the number of Ubuntu 20 worker nodes that you are replacing. Also, be sure to include the custom labels that you retrieved earlier.

```
$ ibmcloud ks worker-pool create classic --name NAME --cluster CLUSTER --flavor FLAVOR --operating-system UBUNTU_24_64 --size-per-zone WORKERS-PER-ZONE --label LABEL --label LABEL
```

For VPC clusters. See the [CLI reference](#) for command details.

```
$ ibmcloud ks worker-pool create vpc-gen2 --name NAME --cluster CLUSTER --flavor FLAVOR --operating-system UBUNTU_24_64 --size-per-zone WORKERS-PER-ZONE --label LABEL --label LABEL
```

- Verify that the worker pool is created.

```
$ ibmcloud ks worker-pool ls --cluster CLUSTER
```

- Prepare to add a zone to your worker pool. When you add a zone, the number of worker nodes you specified with the `--size-per-zone` option are added to the zone. These worker nodes run the Ubuntu 24 operating system.

Important: Classic and VPC clusters: If possible, use the same Classic VLAN or VPC subnet for the new zone as you are using for the Ubuntu 20 worker pool.

If you need to use a different Classic VLAN or VPC Subnet for these new nodes, note that switching your worker nodes to a different Classic VLAN or VPC subnet can have significant effects your workload and cluster functionality. For example, you might experience the following. - In Classic clusters: Classic LoadBalancers might not work because the LoadBalancer IPs are specific to a single VLAN, and traffic can only be routed to the LoadBalancer if there is a worker node in the cluster on that VLAN that the LoadBalancer IP can be placed on. - In Classic or VPC Clusters: Problems with the network connections to and from workers in the new Classic VLANs or VPC subnets if you have any Security Groups, Network ACLs, Firewall/Gateway rules, Custom routing, coreDNS configurations, and so on, that are specific to the old VLANs, VPC subnets, or cluster worker IP addresses or subnets.

- Add the zone to your worker pool that you retrieved earlier. When you add a zone, the worker nodes that are defined in your worker pool are provisioned in the zone and considered for future workload scheduling.

- Classic clusters:

```
$ ibmcloud ks zone add classic --zone ZONE --cluster CLUSTER --worker-pool WORKER-POOL --private-vlan PRIVATE-VLAN-ID --public-vlan PUBLIC-VLAN-ID
```

- VPC clusters:

```
$ ibmcloud ks zone add vpc-gen2 --zone ZONE --cluster CLUSTER --worker-pool WORKER-POOL --subnet-id VPC-SUBNET-ID
```

- Verify that worker nodes are available in your new worker pool. In the output, find the listing for the new worker pool and check the number in the **Workers** column.

```
$ ibmcloud ks worker-pool ls --cluster <cluster_name_or-ID>
```

- Classic clusters:** If you created your worker pool in a new VLAN, move your ALBs to the new VLAN. For more information, see [Moving ALBs across VLANs in classic clusters](#).

Removing your old worker pools

Important: Before you remove your Ubuntu 20 worker pools, consider scaling them down and keeping them for several days before you remove them. This way, you can scale the worker pool back up if your workload experiences disruptions during the migration process. When you determine that your workload is stable and functions normally, you can remove the Ubuntu 20 worker pool.

- List your worker pools and note the name of the worker pool you want to remove.

```
$ ibmcloud ks worker-pool ls --cluster CLUSTER
```

- Run the command to remove the worker pool.

```
$ ibmcloud ks worker-pool rm --worker-pool WORKER-POOL --cluster CLUSTER
```

Contribute in GitHub

[Open doc issue](#)

[Edit topic](#)

[Catalog](#) [Cost Estimator](#) [Help](#) [Log in](#) [Sign up](#)

On this page

Ubuntu 24 limitations

[Before you begin](#)

[Migration steps](#)

[Removing your old worker pools](#)

Get started	^
Getting started with IBM Cloud Kubernetes Service	
Understanding IBM Cloud Kubernetes Service	
Your responsibilities with using IBM Cloud Kubernetes Service	
Use cases	▼
Learning paths	▼
Release notes	
Tutorials	^
Tutorials library for Kubernetes Service	
Setting up your first cluster in your Virtual Private Cloud (VPC)	
How to	^
Planning your cluster environment	▼
Preparing your account	▼
Installing the CLI	▼
Setting up the API	
Creating clusters	▼
Accessing clusters	▼
Adding worker nodes	▼
Managing the cluster and worker node lifecycle	^
Checking your cluster version, operating system, and Kubernetes server version	
Updating clusters, worker nodes, and cluster components	
Creating and managing dedicated hosts on VPC Gen 2 infrastructure	
Preparing for host maintenance updates	
Setting the cluster credentials	
Rotating CA certificates in your cluster	
Migrating to a new Ubuntu version	
Adding tags and labels to clusters	
Checking worker node resource reserves	
Setting up encryption	▼
Enhancing security	▼
Managing access control	▼
Securing cluster workloads	▼
Controlling network traffic in Classic clusters	▼
Controlling network traffic in VPC clusters	▼
Adding static routes to worker nodes	
Configuring the cluster DNS provider	
Setting up the cluster autoscaler	▼
Logging and monitoring	▼
Setting up an image registry	
Continuous integration and delivery for app development and deployment	
Developing and deploying apps	▼
Setting up a service mesh with Istio	▼
Exposing apps	▼
Preventing app workloads from running on edge worker nodes	
Deploying the Sysdig agent on	
Creating the IBM Storage Operator cluster add-on	
Setting up Block Storage for Classic	
Setting up Block Storage for VPC	▼
Setting up File Storage for Classic	
Setting up File Storage for VPC	▼
Setting up Object Storage	▼
Setting up Portworx	▼
Backing up and restoring storage data	
IBM Cloud storage utilities	
Enhancing cluster capabilities with integrations	▼
Managing cluster costs	▼
Tuning performance	
Removing clusters	
Reference	^
API reference	▼
CLI plug-in reference	▼
Version history	▼
Add-on version history	▼
Ingress version history	▼
Archived version history	▼
Activity Tracker events	▼
Locations	
Supported IBM Cloud and third-party integrations	
Default service settings for Kubernetes components	
Worker node flavors	▼
Related links	▼
Help	^
Viewing cloud status	
FAQs	
Best practices for IBM Cloud Kubernetes Service	
Running tests with the Diagnostics and Debug Tool	
Troubleshooting apps in IBM Cloud Kubernetes Service	
Troubleshooting	▼
Contacting support	
Service limitations	
Requesting access to allowlisted features	
Site map	
Go to product UI	🔗
About this product	🔗
Expand all Collapse all	